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**Adapting the Randolph-Sheppard Vending Stand Program
to the Advances of Automation**

Project No. RD-1626-S

FINAL REPORT

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Ad74
vol. 2

**Department of Vocational Rehabilitation
GOVERNMENT OF THE DISTRICT OF COLUMBIA**



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FINAL REPORT

ADAPTING THE RANDOLPH-SHEPPARD VENDING STAND PROGRAM
TO THE ADVANCES OF AUTOMATION

PROJECT NO. RD-1626-S

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Significant Findings for the Rehabilitation Worker

1. Blindness as such is not a bar to successful training and performance as the manager of an automatic full-line vending facility. Consequently, fully automated small business enterprises located on Federal properties can be identified as Randolph-Sheppard Vending Stands.

2. The licensed blind operator of an automated vending stand is an adequate replacement for the vending machine attendant normally supplied by the vending company at each full-line vending location.

3. Generally speaking, criteria used to select competent vending stand operators for manual vending stand operation can serve nicely with minor modifications to select competent operators of fully automated vending stands.

4. Satisfactory servicing, that is loading, sanitizing, etc. of full-line vending equipment by totally blind persons, does not require structural or engineering changes in equipment in current use. The use of certain aides which are relatively easy to fabricate is highly desirable.

5. It is possible to establish effective recordkeeping procedures which can be handled satisfactorily by totally blind persons and which will at the same time protect the mutual interest of the automated vending stand and the vending company. It is possible to establish satisfactorily counting procedures for merchandise and fiscal control which can be handled by a totally blind person while not interfering with the similar day-to-day procedures of the vending machine company.

6. It seems impractical to think in terms of one individual managing a vending facility which includes both automated full-line service plus manually operated counter service. At certain points the efficient operation of these two vending modes is mutually exclusive unless at least two people are available for managerial duties.

7. Basic training in automatic vending is best accomplished in a low sales volume location under close supervision. This may be done satisfactorily in a training facility which combines instruction in both manual and automatic vending stand operation. It is highly desirable, however, to have an advanced training location with a medium to high sales volume which is completely automated. Supervision of the advance training stand should be thorough enough to prevent any serious breakdown in service but flexible enough to allow the trainee to demonstrate independence.



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INTRODUCTION

Background Information

The background of this project is intimately bound up with the history of the Randolph-Sheppard Vending Stand Program and the growth and development of the automatic vending industry. The Randolph-Sheppard Act which was signed into law by the President of the United States on June 20, 1936 gave major impetus to the development of the vending stand program throughout the country which has given employment to thousands of blind persons as managers of small business enterprises. The automatic vending industry as we know it today has come into being since World War II with the development of increasingly sophisticated equipment capable of vending a wide variety of articles. For a fuller perspective it is desirable to trace briefly the historical development of these two business enterprises.

Growth of Automatic Vending Industry

Many visitors to Colonial Williamsburg, Virginia have seen in the Raleigh Tavern a contrivance which is surely one of the earliest vending machines in this country. It is a coin operated pipe tobacco vendor which was in common use in Colonial Virginia during the 18th Century. The pipe smoker inserted a large copper coin, similar in size to the present day British penny, into a mechanism on the side of a brass canister. By turning a handle the top of the canister was unlocked and the purchaser raised the lid and filled his pipe from the tobacco inside. The effectiveness of this system of course was dependent upon the honor of the purchaser who was supposed to close the lid, relocking the canister, after filling his pipe once. How the system worked is perhaps the subject of another investigation.

Leaping over the next 150 years or so to the middle 1930's it appears as if the vending industry had completely discarded the honor system and was chiefly concerned with perfecting a vendor which would vend one cold bottled soft drink for one nickel every time. Immediately prior to World War II this industry was chiefly occupied with vending crackers, cookies, candy, gum, cigarettes, and soft drinks via coin operated equipment. Of course the War brought a halt to the development of vending equipment and most of these manufacturers turned their talents to the fabrication of components for the military effort.

In the years following the War while automation was becoming a household word the vending industry moved rapidly into a program of equipment development and sophistication which continues today. In the late 1940's different and more efficient bottle drink vendors were developed followed immediately by ice cream and milk vendors.

In the middle 1950's vending equipment manufacturers achieved a significant breakthrough with a development of the "batch brew" coffee vendor. Prior to this time the industry had "toyed" with instant coffee vendors which attracted little public support. In the early 1960's the cup-type soft-drink vendor plus hot and cold food vendors came on the market and automatic full-line vending was an accomplished fact. Since that time there has been a continuing program of refinement and further sophistication of this basic equipment.

It is pertinent to note that in recent years a number of the larger vending machine companies have developed a food service concept which reintroduces manual vending in combination with automatic service. Perhaps in recognition of certain limitations of purely mechanical service for in-plant or in-office feeding these companies have combined small efficient cafeteria-type units with banks of machines in the same vending facility. These cafeteria units are operated only during the luncheon periods, for example, and serve a small number of hot entrees.

Historical Background of the Randolph-Sheppard Act

The present day concept of vending stands is reputed to have started about 1895 and it is quite likely that blind persons operated sizable retail businesses in this country long before that. By 1910 blind persons were establishing themselves in certain industrial plants in the mid-west and New England where they ran lunch services of one kind or another. By 1920 the refreshment stand in an industrial plant or in an office building operated by a blind person was an accepted method of employment in the field of work with blind persons.

Because of a basic lack of organization, training, and supervision however, the rate of failure of these small business enterprises was high. As early as 1921 Senator James Wadsworth of New York unsuccessfully introduced a bill to open Federal Buildings to vending opportunities for blind persons. Again in 1929 similar legislation was introduced by Senator Schall of Minnesota and again the effort was unsuccessful. The Schall bill, however, stimulated extended discussions and negotiations between Blind Rehabilitation Personnel and Government Officials over how the intent of such legislation could be implemented effectively.

In the spring of 1933 President Franklin D. Roosevelt wrote to the Secretary of Treasury requesting that blind persons be allowed to sell newspapers and magazines in buildings under his jurisdiction which included the Post Office Buildings. This request was implemented but the regulations required that all equipment used in connection with the vending operation be portable enough to be removed at night. Also in 1933 the Public Buildings Administration then a branch of the National Park Service granted to the Rehabilitation Service of Washington, D.C. seventeen vending locations in Federal Buildings. Without resources for supervision these vending stands became unsatisfactory. By 1937 only 11 of them remained in operation. In 1934 Representative Matthew Dunn of Pennsylvania was unsuccessful with a bill which would have set up a Bureau in the Post Office Department for the management of vending concessions for the blind. By now however the field of work for the blind was organized and prepared to pursue legislation confronting problems which had thwarted previous efforts. Legislation was sought to set up a controlled or agency managed vending stand program with sufficient organization and supervision to insure well run small business enterprises.

During the early 1930's Jennings Randolph, Representative from West Virginia became deeply interested in these efforts and began to work closely with the organized interests from the field of work with the blind. Early in 1936 he introduced legislation and steered it to passage by the House of Representatives. At the same time he arranged for co-sponsorship of the measure by Senator Morris Sheppard of Texas and it also passed the Senate. Thus the bill became P.L. 732, 74th Congress (The Randolph-Sheppard Act) when it was signed by President Franklin D. Roosevelt on June 20, 1936.

The Act established two important principles. The first of these officially and specifically "opened the door" by providing that "...blind persons licensed under the provisions of this Act shall be authorized to operate vending stands in any Federal Buildings where in the discretion of the head of the Department or Agency in charge of the maintenance of the Building such vending stands may be properly and satisfactorily operated by blind persons". The second principle was that a licensing agency would be designated in each state to be responsible for the Program. The licensing agency was required to conclude a cooperative agreement with the Federal Government which outlined the State Agency's responsibility for training, placement and supervision of licensed blind vending stand operators.

With the Randolph-Sheppard Act as an opening wedge the next few years were characterized by slow progress based upon persuasion and demonstration.

A surprising majority of Federal Officials in the Executive Branch of the Government opposed the passage of any legislation giving blind people preference in the operation of businesses on Federal Property.

The focus of this project is on the vending stand program in Washington, D.C. and how it has been affected by automatic vending. Prior reference has been made to seventeen vending opportunities extended to blind persons in Government Buildings in Washington, D.C. under the auspices of the Public Buildings Administration in 1933. Because basic organization and supervision were lacking a number of these businesses were discredited and by the time the Randolph-Sheppard Act became law the number had been reduced to eleven. Before the vending stand program, under the Act, became fully implemented in the District this number had been further reduced to eight. The sour after-taste of these initial failures formed an unfortunate foundation upon which to build a sound and enduring Program. Nevertheless a beginning was made and the Vending Stand Program in the Nation's Capital went on to become the most dramatically successful in the United States.

In December 1936 the Vocational Rehabilitation Service of Washington, D.C. in the Office of Education, U.S. Department of Interior, concluded an agreement with the Departmental Welfare and Recreational Association to supervise eight vending stands operated by blind persons in Federal Buildings. The DWRA Inc. was a private non-profit corporation set up to handle employee feeding in large Government buildings. It handled the new vending stand program until August 1939 when the demands of its major responsibility made it desirable to give up vending stand supervision.

On September 1, 1939 the Washington Society for the Blind took over the management of the Vending Stand Program which had grown to include fifteen small business enterprises. Following the official transfer of responsibility for program management the Society and the Vocational Rehabilitation Service of Washington, D.C. concluded a cooperative agreement for the operation of the Program under the terms of the Randolph-Sheppard Act. Simply stated this agreement was to the effect that the Vocational Rehabilitation Service would license qualified blind persons as vending stand operators and the Society would run the Program.

From this point the Vending Stand Program embarked upon a period of uninterrupted expansion. From 1939 to the present the number of vending stands rose from 15 to 73. In October 1954 P.L. 565 created the Department of Vocational Rehabilitation within the Government of the District of Columbia. The newly created Department became the licensing agency under the Randolph-Sheppard Act in Washington, D.C. and was vested with overall authority and responsibility for the Vending Stand Program. The Washington Society for the Blind has continued to handle the day-to-day management of the Vending Stand Program under contract to the Department of Vocational Rehabilitation.

Soon after the Society took over the Program, in 1939, automatic vending began to play its own interesting role in the growth of this important economic opportunity for blind persons. At that time no public funds were available to promote expansion in the form of additional vending stands and the Program was thrown upon its own resources to provide the fixtures, equipment, stock and the like necessary to establish new opportunities. Arrangements were made with local vending machine companies to place coin operated equipment, mostly cigarette and candy vendors, on certain private premises and later in government office buildings, the commissions from which were used by the Society to establish new vending stands. In this curious fashion, therefore, early vintage automatic vending helped nourish the manually operated vending stand program at a critically important time.

Early Randolph-Sheppard Vending Stands did an exclusive "over-the-counter" business selling candy bars, cigarettes and other tobacco products, newspapers, magazines, bottled soft drinks and very little else. The value in effectiveness of this kind of service to Government Employees became evident

quickly and there was a corresponding demand to increase the variety of articles sold. This demand was readily and gladly met by the vending stand program, with the approval of appropriate Government Officials, and the more traditional items were supplemented by prepackaged sandwiches, cakes, pies, cookies, crackers, potato chips and the like, ice cream, milk, fruit juices, cosmetic supplies, hosiery, novelties, greeting cards and freshly brewed coffee. Usually vending stand operators were required to employ sighted assistants to serve the coffee.

This created a situation wherein the sale of coffee was feasible only from vending stands where the income generated was sufficient to meet this added payroll expense. The sale of approximately 200 cups of coffee per day was necessary for this purpose. In a number of vending stands, however, where coffee was otherwise desirable the overall patronage was insufficient to meet this quota. Also, in several instances, plumbing drains necessary in the operation of coffee urns were not accessible from the vending stand area. Therefore, the sale of coffee from vending stands was not universal.

At this point the only automatic vending income accruing to individual vending stands was from vending equipment located away from the stand area but "...in reasonable proximity to and in direct competition with the vending stand". In the early 1950's local vending firms approached the Vending Stand Program with the idea of placing coffee vending machines in stand areas. The basic idea was attractive, particularly to vending stands where urn brewed coffee was not feasible. At that time, however, coffee vending equipment was primitive by today's standards, producing an instant type coffee which gained little customer approval and none but a few experimental units were installed in the program. In 1955 one local vending machine company introduced equipment which vended coffee that had been brewed in the commissary and taken to the vending site where it was kept warm and dispensed with cream and sugar from coin operated equipment. Several of these units were installed in vending stands where they were more or less successful. The obvious drawback in this arrangement was that the afternoon customer got a cup of coffee which was beginning to deteriorate.

In 1958 the coffee brewing vending machine made its appearance in Washington, D.C. and quickly replaced the prebrewed equipment. This sophisticated machinery brewed coffee in batches, later one cup at a time, and dispensed it with the usual combination of sugar and cream. The batch brewed coffee machine then, represented the first significant involvement of automatic vending with vending stands of the Randolph-Sheppard Program in Washington, D.C. This equipment was installed immediately in most of the vending stands which had not sold coffee previously, and even replaced coffee urns in a number of locations. The vending companies, of course, pushed this idea vigorously, pointing out that the equipment, which was serviced by the company, need not concern the vending stand operator. It worked for him but required none of his attention. The income was "gravity" if he had not sold coffee before. If it replaced the coffee urn it helped him reduce his payroll overhead since he no longer need hire someone to serve coffee. The commissions from coffee vending machines did not equal the gross profits of coffee sold over the counter, but the machine worked 24 hours a day and the higher overall sales offset this financial disadvantage.

Soon three things happened which together gave entree to a second vending machine, the cup type soft drink vendor. First, of course, equipment was developed which would vend carbonated and noncarbonated beverages plus ice in a cup. Secondly, the price of most bottled soft drinks was raised to 10¢. In the third place, the combination of the first two occurrences made the "empty bottle" problem much less tolerable. For years the bottle deposit on soft drinks had annoyed customer, vendor and manufacturer alike. The storage for empty bottles was a constant space problem and potential sanitary hazard. The advent of the throwaway bottle changed the character of the problem but did not solve it in the vending stand program. In government office buildings empty bottles which need not be returned were

simply thrown in the trash, or left on desks, window sills, and in stairways. Broken bottles created a problem for cleaning personnel and a real nightmare in large government buildings where waste paper was bailed and sold for scrap.

The General Services Administration is the agency in charge of operation, maintenance and protection of most Federal properties in the District of Columbia. As such it is the agency which approves the establishment of vending stands on these properties and which monitors their operations on behalf of the U.S. Government. GSA had willingly acceded in the installation of coffee vending machines and now took an even stronger position regarding the soft drink vendor. Motivated strongly by the "empty bottle" problem GSA also began to push for the establishment of 24 hour service to accommodate cleaning and other after hours personnel. With the 24 hour capacity of automatic vending equipment at hand, GSA requested that certain existing vending stands be modified with locking devices for the counter so the remainder of the stand area could be accessible night and day. By adding cigarette, and perhaps cookie-candy vendors to the hot and cold drink vendors this open area was accessible 24 hours a day. This basic design was also strongly encouraged in the establishing of new vending stands.

In 1960 the first full-line vending room began operating in the Randolph-Sheppard Program in Washington, D.C. In addition to the now familiar beverage, cigarette and candy vendors this room introduced ice cream and milk machines plus the more sophisticated hot and cold food vendors. This facility was operated as an adjunct to a manually operated vending stand previously established in the building. The vending room was managed by an attendant of the company supplying the equipment and the commissions on sales accrued to the benefit of the licensed blind operator of the manual vending stand. In quick succession eight additional vending stands became involved with full-line vending between 1961 and the end of 1964. Of this number five were new stands established as combination facilities with over-the-counter sales plus full-line automatic vending. The remaining three vending stands were renovated to include full-line automatic service in addition to over-the-counter service.

The effect of automatic vending on program income was dramatic. As shown in the table appearing below vending machine income for the 12 months ending in December 1955 was \$4,700. For the comparable period ending June 30, 1957, this figure had increased almost seven times and jumped to \$31,000. This time period coincides with the introduction of the prebrewed coffee machine mentioned earlier. Two years later the vending income doubled rising from \$33,000 for the fiscal year 1958 to \$65,000 for the fiscal year 1959. Again this time period coincides with the introduction of coffee brewing machines. As the soft drink vendors were added and the 24 hour service concept gained momentum, more and more automatic vending equipment appeared within existing stands as well as newly established stands, and vending income continued its steep climb. The advent of full-line vending only made the financial picture a little brighter and it looked as if a trend were developing.

Summary of Vending Machine Income

<u>Year Ending</u>	<u>Vending Machine Income</u>
December, 1955	\$ 4,700
June, 1957	31,000
June, 1958	33,000
June, 1959	65,000
June, 1960	124,000
June, 1961	214,000
June, 1962	255,000
June, 1963	306,000
June, 1964	330,000
June, 1965	366,000

STATEMENT OF THE PROBLEM

To this point it would appear as though the impact of automatic vending upon the Randolph-Sheppard Vending Stand Program was an unqualified success. But, a few clouds were building on the horizon and some vending stand program officials became concerned over certain implications of the union between automatic and manual services. There was no denying the financial benefits, but what about the long range effect of automation upon the vending stand program in Washington, D.C. and the broader impact of this growing industry on basic principles of the Randolph-Sheppard Act itself? The coffee vending machine had been a boom for the most part, producing new income in some vending stands where no coffee sales had existed before. Where coffee vending machines replaced urns the profit structure was usually not seriously affected. However, with the coming of the cold drink machine and more particularly with the advent of full-line vending, merchandise began to disappear from the counters of vending stands only to reappear in vending machines. The bottled drink problem already mentioned would have inevitably made the cup-vended soft drink more attractive. More disturbing was the prospect of the inroads full-line vending might make into the acknowledged preserve of the blind vending stand operator namely the manual vending of prepackaged items which had become closely identified with the manually operated vending stand. Now all of these items could be vended automatically from coin operated vending machines.

Where did the blind vending stand operator fit into this picture? In the combination automatic manual vending stands established in the Program between 1961 and 1964 his role was diminished. At these locations the beverages, food and other items listed above were all vended automatically from a bank of machines attended by an employee of the vending company supplying the equipment. The licensed blind operator manned a counter from which he sold newspapers, periodicals, aspirin, facial tissue, cigars, pipe tobacco, greeting cards and other items which did not "compete" with the machines. True, the machines were working for him but as the manager of the vending stand he was being pushed into the background automatically.

The problem involved raised two basic questions. The first: Was automatic full-line vending the wave of the future in the Randolph-Sheppard Vending Stand Program? And second, if so: Were we faced with the uneasy prospect of the blind operator sitting in the stock room counting money which he had played no useful part in creating? The means for answering these questions were not available. With respect to the first, the vending machine companies certainly hoped it was so and pushed a vigorous "selling" campaign with Government Officials who initiate requests for vending service in their respective departments. The second question, quite obviously, could be positively re-phrased to ask: Can a blind person be trained successfully to operate automatic equipment and to manage an automatic vending stand? Time and the reaction of Government Officials would largely answer the first question. The answer to the second was to some extent up to the Department of Vocational Rehabilitation which is the licensing agency for the Randolph-Sheppard Vending Stand Program in Washington, D.C.

While the grant application leading to this project was being prepared, tentative experimentation by the licensing agency went forward with the cautious cooperation of several vending machine companies. The attitude of these companies was skeptical at best but several licensed operators received exploratory training in the servicing of automatic equipment from technicians and supervisors in three local vending firms. The reaction of the companies to this experience ranged from a tentative "maybe" to a flat "no, a blind person cannot service a full-range of automated food vending equipment".

Early in 1964, before this project had been approved, an opportunity came to establish a fully automated vending stand in a Government building where a manually operated facility was not acceptable. The Department of Vocational Rehabilitation negotiated a contract with one of the vending machine companies

to place full-line vending equipment at this location and train a blind operator, on the job, to manage the facility. The agreement was concluded, the training undertaken, and in November 1964 a blind operator was licensed to manage this fully automated vending stand. The operator selected was within the definition of blindness but had useful residual vision. Also the agreement with the vending company serving the location specified that the operator would work with a sighted assistant trained by the company.

Consequently as this project got underway in February 1965 a legally blind vending stand operator was managing a fully automated full-line vending stand with the assistance of a sighted employee. The vending stand was doing a gross monthly business of \$4,000. Service was quite satisfactory and there was every indication that the operator was doing his share. But! Could he do it all alone, and, what about a totally blind person? These critical questions remained and, by and large, so did the skepticism of the vending machine companies.

METHODOLOGY

With this background then the research and demonstration project got into active operation in February 1965 under the auspices of the District of Columbia Government's Department of Vocational Rehabilitation with the assistance of a grant from the Vocational Rehabilitation Administration in the U.S. Department of Health, Education, and Welfare. A training specialist was recruited to handle most day-to-day activities of the project and the Department's Vending Stand Program Coordinator was named as principal investigator.

As set forth in the Grant Application the purposes and objectives of the Research and Demonstration were as follows:

1. To explore and determine the feasibility of vending machine installations to be stocked, serviced and managed by blind persons.
2. To identify the types of machines which lend themselves to operation by a blind person.
3. To experiment with design of the machines, and make modifications which can cause the machines to be more adaptable for operation by blind persons.
4. To develop techniques which will enable blind persons to work effectively within the frame work of supply, and food control procedures used by established vending machine companies in their day-to-day operations.
5. To develop contractual relationships between the licensing agency and vending machine companies which could serve as prototypes for other agencies. This would include establishing rates of compensation for operator's services, commissions on sales, fiscal arrangements and mutual responsibilities.
6. To establish an experimental unit, featuring a variety of merchandising units to study the most suitable methods for screening trainees, techniques of training and administration of a training program.
7. To explore the types of layout designs featuring over-the-counter and automatic merchandising which can serve as tested prototypes for other agencies.
8. To report the findings of this project regarding administration, training, engineering and layout design in a form which will be useful in preparing an operations manual.

Having hired a training officer the next objective was to provide a training facility and this was done with the cooperation of the General Services Administration and the U.S. Tariff Commission. Two adjoining rooms in the basement of the Tariff Commission were made available. This space was under GSA's jurisdiction and was assigned to the Department under the same

enabling regulations which makes space on Federal Property available for the operation of vending stands.

One of these rooms was fitted out as a training-work room and the other was made into an automatic snack bar rendering service 24 hours a day. With the assistance of the Office of Procurement in the District Government the Department solicited bids from local vending machine companies to supply the necessary automatic equipment for the snack bar. Three bids were received and the one most advantageous to the project's aims was chosen.

The vending room was supplied with the following equipment: Vendo Coffee and Hot Chocolate vendor model E; Seiberg Cup-type Cold Drink vendor, 4 flavor non-pressurized model; Rowe Cold Food Vendor; Stoner Pastry vendor, model #121; Stoner Hot Can Food vendor, model #137-FL; Stoner Cigarette vendor, model #C23; Stoner Candy vendor, model #77; Liten Micro-wave Oven; ABT Dollar Bill Changer; Standard 50¢ and 25¢ Change Maker.

Since the general aim of the project was to discover the extent to which blind persons could be effective in the management of completely automated vending facilities, the training specialist's first task was to become familiar with basic techniques used to impart information and otherwise to instruct persons who cannot see. This was done through discussion with staff members of the Department of Vocational Rehabilitation and through direct observation of blind persons being trained in a variety of skills at the Columbia Light-house for the Blind.

Next, the training specialist needed to learn thoroughly the day-to-day management of a full-line automatic vending facility, since, at the beginning, he would be performing these duties personally in the course of the training. For this he spent time with the contracting vending company learning the duties of an automated snack bar attendant and studying the company's commissary, maintenance shop, and bookkeeping procedures.

To begin the project three totally blind males were selected from the case load of clients in the Division of Services for the Visually Impaired in the Department of Vocational Rehabilitation. These trainees ranged in age from 21 to 45. All had intelligence in the average range as measured on the verbal portion of the Weschler Adult Intelligence Scale, all demonstrated proficiency in elementary braille, and all possessed sufficient independent mobility to be punctual and regular in attendance, and to move freely about the work area. All three were told that the training would be experimental and exploratory and that there could be no prior commitment regarding employment at the end of a successful training period. For additional material concerning methodology and for a description of the results obtained by this project please refer to the Operations Manual which accompanies this report. The Manual was designed as a separate publication and therefore contains certain introductory material which repeats a small part of what has already been stated here.

DISCUSSION AND IMPLICATION OF RESULTS

The results of this project have in general fulfilled all of the hopes of those who prepared the original application for grant funds. It has been conclusively demonstrated that blindness per se does not prevent an otherwise qualified individual from managing successfully a fully automated vending facility. This means that when such a facility is desirable in order to serve employees on Federal Property it can properly be operated as a vending stand under the terms and provisions of the Randolph-Sheppard Act. As this report is being written four fully-automated vending stands are being managed independently by graduates of this training project who are licensed as operators under the Act.

Success in "Adapting the Randolph-Sheppard Vending Stand Program to the Advances in Automation" should not be construed as pointing the way toward wholesale changes in the existing, predominately manually operated, vending stand program in Washington, D.C. Rather, the results of the past three years

indicate that the Vending Stand Program can utilize this added diminution of full-line automatic vending in meeting the needs of Government employees.

In the Vending Stand Program the forte of automatic vending lies in its capacity to render adequate after hours service--evenings, double shifts, week-ends and the like. When the demands for service can be met during routine office hours the manually operated vending stand, with perhaps machine-vended coffee and soft drinks, is the method of choice in the vending stand program. This is so because the manual operation provides a greater profit margin for the blind operator plus a wider service to the customer in the form of additional items not normally found in a fully automated full-line vending facility. These include certain tobacco products and accessories, aspirin and related products, cosmetic supplies, greeting cards, as well as other sundries and novelties. When, however, the service requirement in a particular location goes beyond routine office hours, it is often inconvenient or financially infeasible to keep a manual operation open for business. In this instance the automated vending stand can provide entirely acceptable service without comparable difficulties. The automated vending stand operates 24 hours a day, 7 days a week while requiring attendance during only 25% to 30% of this time. Attendance during peak periods of use is desirable in order to promote customer satisfaction. However, a well-run automated vending stand requires relatively few hours each day in order to service the vending equipment, keeping it clean and stocked with sufficient merchandise for sale.

Profile

The experience of the project seems to indicate that the successful vending machine attendant is an individual with sufficient basic intelligence to grasp and retain information relative to procedures as outlined in the Operations Manual. In addition, he must be manually dexterous enough to implement these procedures efficiently. Beyond this he should possess less tangible qualities which are directly related to success in small-business management. He needs a sense of unity which brings together all of the separate pieces of the vending operation. He needs to remain comfortable while working in a relatively confined space. He should be orderly and precise in his record-keeping. He should always be well groomed with a positive and straightforward attitude toward his work. He should possess sufficient maturity and sturdiness to accept the maxim that "the customer is always right" when he knows very well this is not always the case.

It would appear, in fact, that the operator of an automated vending stand differs little from the successful operator of a manually operated location. This is so at bottom because there are few essential differences between the two operations. The capable operator of an over-the-counter vending stand can make a successful transition to automatic vending by mastering procedures for servicing and stocking the vending equipment plus an expanded and more detailed system of recordkeeping. Conversely, the competent automated vending stand operator can move into manual operation without difficulty by learning efficient techniques for displaying and serving merchandise across the counter plus techniques for handling money smoothly and rapidly. Beyond this, the ingredients for success are the same in either operation.

Equipment

In the course of experience at two training locations, trainees in the project were exposed to a variety of vending equipment as follows: 2 different coffee and hot chocolate vendors, 2 different soft drink vendors, 2 different cold food vendors, 2 pastry vendors of the same type, 2 candy vendors of the same type, 2 cigarette vendors of the same type, 1 hot canned food vendor, 1 vendor of potato chips and related products, 1 dollar-bill changer, and 1 25¢ and 50¢ changer. None of this equipment proved to be

too complicated for an individual to service adequately on account of blindness, as such. A few minor modifications were made and some aids were constructed as described in the Operations Manual in order to enhance servicing without sight. Also, in a few instances certain electrical connections and terminals were shielded to increase the safety margin. It was not necessary, however, to make or suggest any structural or engineering changes for any of the equipment so that the blind trainees could perform the required tasks.

Relationship with Vending Companies

In demonstrating that a properly trained blind person could replace satisfactorily the attendant of the vending machine company much emphasis has been placed upon the capacity of the individual blind trainee. It was also critically important, however, to do this in a manner which did not otherwise complicate the day-to-day operation of the vending machine company. It would have been virtually impossible for the totally blind trainee to duplicate some of the recordkeeping required by the vending machine companies in certain portions of their standard operating procedures. Therefore, it was necessary to substitute procedures which could be handled by the blind person and which, at the same time, would offer reasonable safeguards to the interest of the vending machine companies.

The means for doing this are outlined in some detail in the Operations Manual and its appendices. In general it was done by making the blind operator responsible and accountable for merchandise, supplies and money while in his possession. In return he was not required to file daily, weekly, and monthly written records as is normally done by the vending company's employee attendant. During each accounting period, every four weeks or every month, the vending company kept records on all items charged to the vending location. At the same time the blind operator was required to keep records in braille or in large print on all items received. Daily discrepancies in the delivery of items ordered, shortages, overages and the like, were noted by the operator and telephoned to the company. At the end of each accounting period when all vending receipts were forwarded to the company, the adjusted list of charges against the location was compared with these receipts to be sure that the expected sales revenue had, in fact, been generated.

This approach has worked reasonably well and there has not been an instance when discrepancies could not be reconciled by comparing company records with the blind operator's records. Thus the basic premise of blind persons satisfactorily attending the equipment is reinforced by the fact that vending companies, in cooperating with this concept, are not required to revamp their supply and accounting methods.

It appears from the experience of the past three years that full-line automatic vending in combination with manual vending at the same location, is more than one individual can handle efficiently. It is re-emphasized here that full-line vending comprises a range of products including at least hot and cold beverages, sandwiches, salads, cakes, pies, pastry, candy, gum and cigarettes. When this range of merchandise is automatically vended, a manual operation in combination with it will require the management of a second person.

Earlier in this report references were made to combination vending stands in the ongoing Randolph-Sheppard Program which were installed prior to the beginning of this project. In these situations the vending machine company supplied machine attendants and the blind licensed operator managed the "over-the-counter" business. Knowing as we do now that a trained blind person can attend vending machines it remains unrealistic to think that one individual blind or sighted can operate both aspects of such a small business enterprise simultaneously.

This position stems primarily from the simple aphorism that an individual cannot be in two different places at the same time. In each of these two vending modes there are certain points when the operator's full attention to

his duties or to his customers is critically important. In most situations, of course, the circumstances leading to full-line automatic vending plus manual vending will also produce sufficient income for two blind operators or one operator and an assistant. In marginal cases, however, it will be unwise usually to commit one individual to a simultaneous operation of both vending modes and thoughtful consideration should be given to all factors before undertaking such an obligation.

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